

Pendulum Lab

Question: What effect does mass, length, and swing height have on a pendulum?

***Note: period is measured in swings per minute

Procedure:

1. Test the effect that mass has on period by testing and completing the table below:

***Make sure the length and swing height of the pendulum remain the same for each trial, we just want to test the difference in mass in this part.

Mass	Period Trial 1	Period Trial 2	Period Trial 3	Average Period
1 washer				
2 washers				
3 washers				
4 washers				

2. Test the effect swing height has on period by testing and completing the table below:

***Make sure the length and mass of the pendulum remain the same for each trial, we just want to test the difference in swing height in this part.

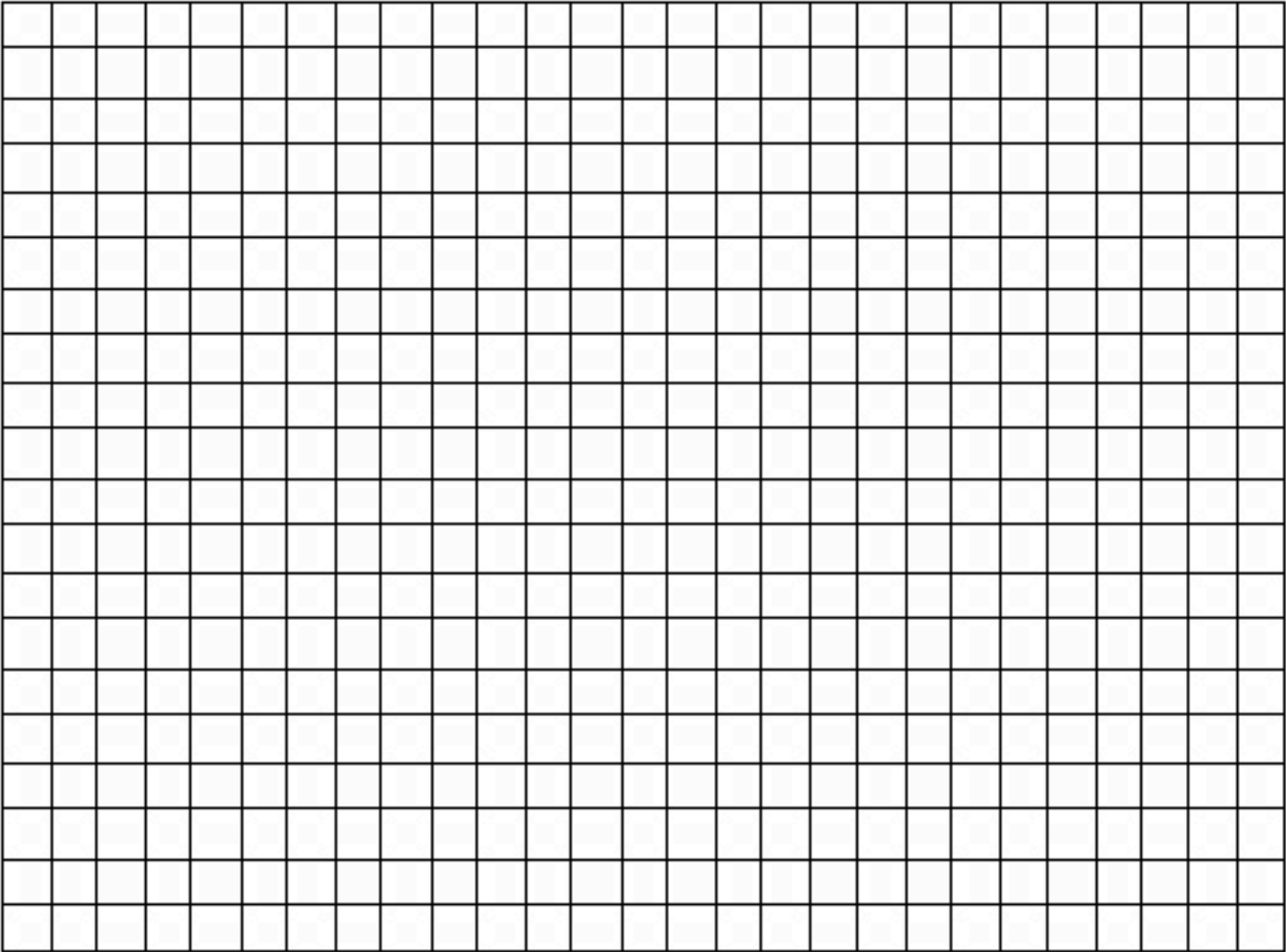
Swing Height	Period Trial 1	Period Trial 2	Period Trial 3	Average Period
Position 1				
Position 2				
Position 3				

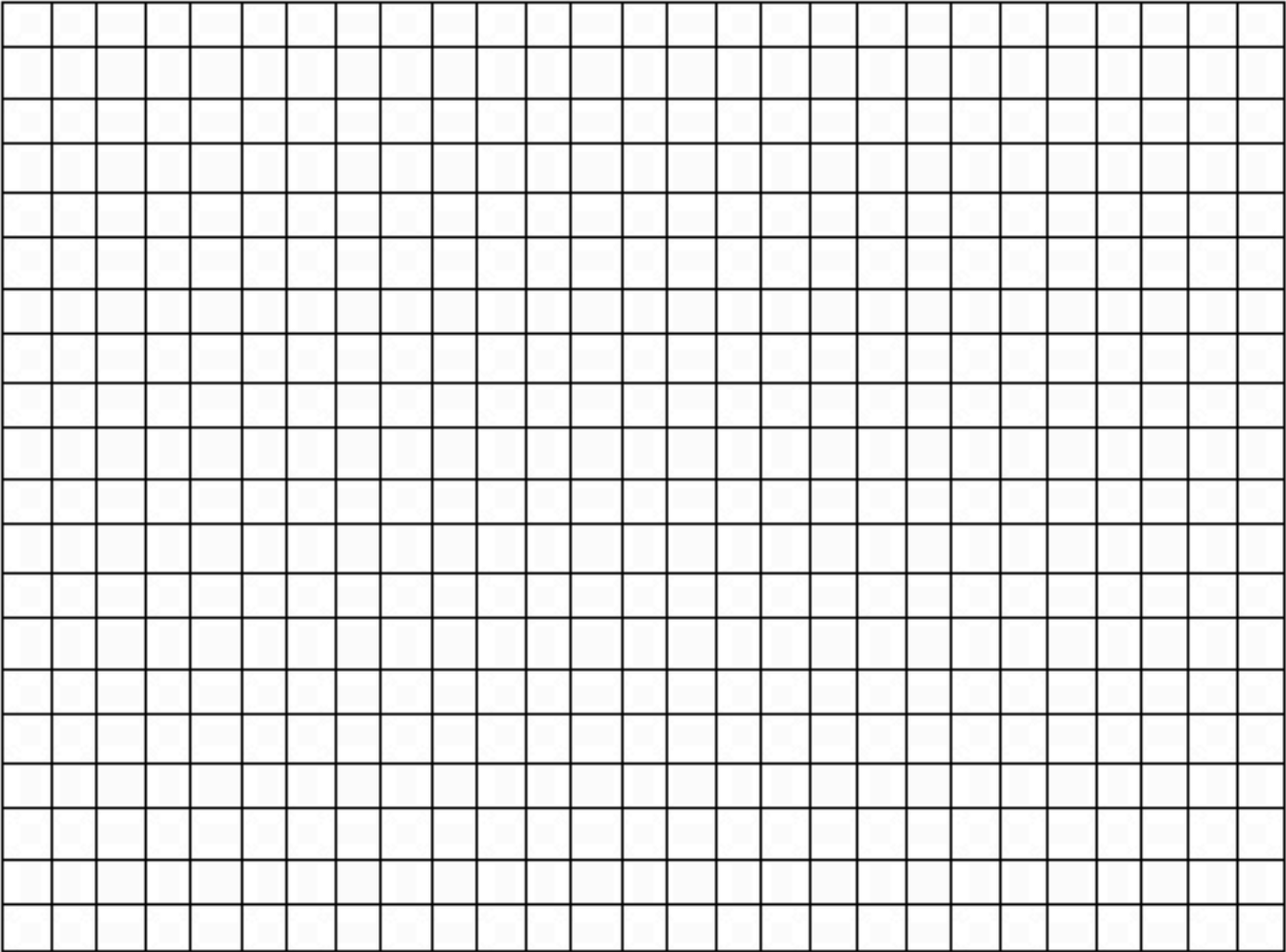
3. Test the effect length has on period by testing and completing the table below:

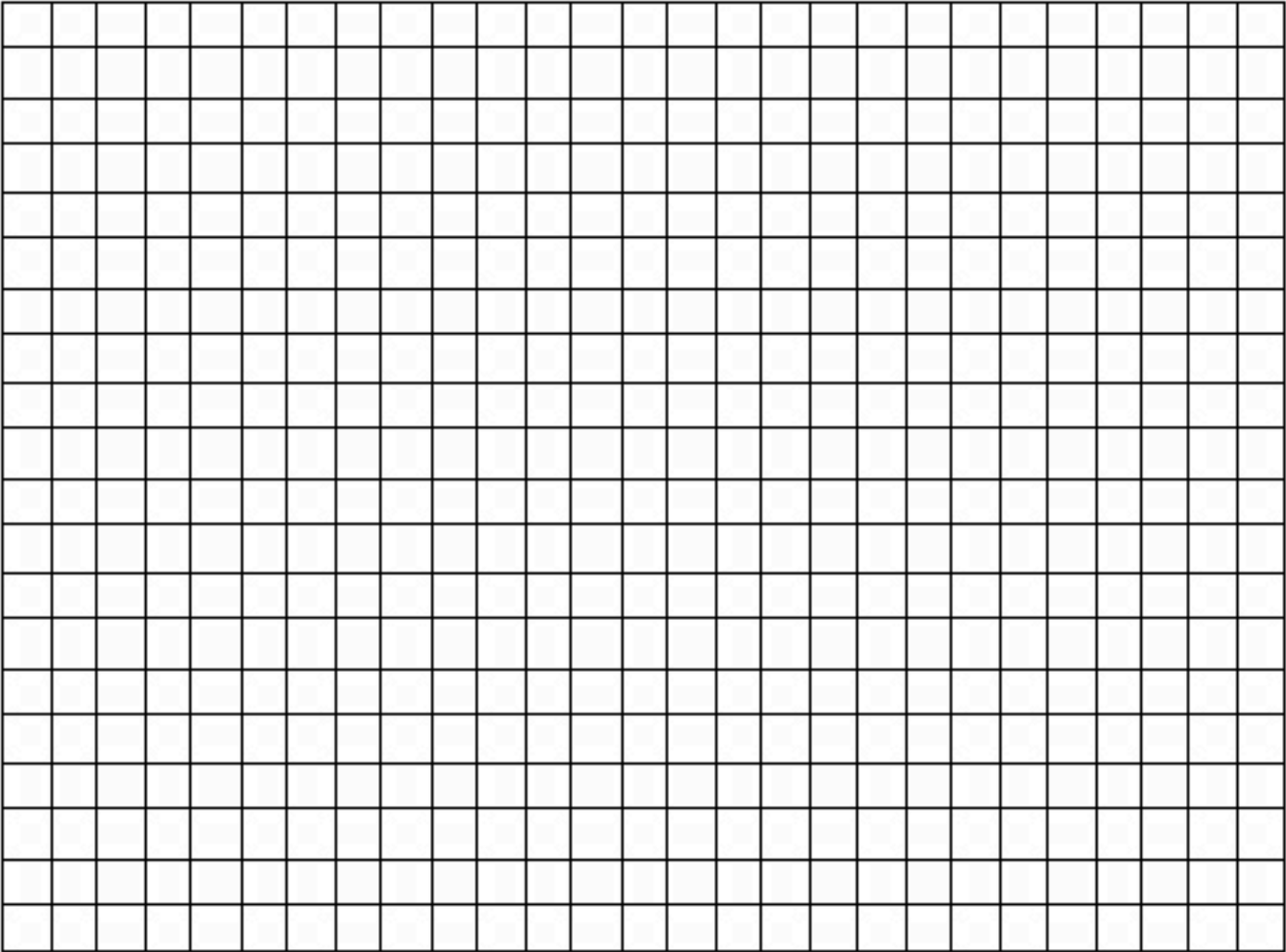
***Make sure the mass and swing height remain the same for each trial, we just want to test the difference in length in this part.

Length	Period Trial 1	Period Trial 2	Period Trial 3	Average Period
10 cm				
20 cm				
30 cm				
40 cm				

4. Create 3 graphs. The 1st graph will be mass vs. period. The 2nd graph will be swing height vs. period. The 3rd graph will be length vs. period.







Questions:

1. Did mass have an effect in period? If yes, how?
2. Did swing height have an effect on period? If yes, how?
3. Did length have an effect on period? If yes, how?
4. You are visiting someone old in your family. At their house they have a grandfather clock. You realize the clock is behind by a couple of minutes. How do you speed up the grandfather clock (increase the period)?